KUSHEV, Georgiy Leont'yevich; BYKOVA, M.S., zasl. deyatel' nauki Kazakhskoy SSR, doktor geol.-miner. nauk, otv. red.; RZHONDKOVSKAYA, L.S., red.; ALFEROVA, P.F., tekhn. red.

[Karaganda coal basin] Karagandinskii uglenosnyi bassein. Alma-Ata, Izd-vo Akad. nauk Kazakhskoi SSR, 1963. 343 p. (MIRA 16:5)

(Karaganda Basin--Coal geology)

BYKOVA, M.V.

Clinical aspects and resort therapy of endarteritis obliterans at Pyatigorsk. Vop.kur.fizioter. i lech.fiz.kult 23 no.4:329-336 Jl-Ag '58 (MIRA 11:8)

1. Iz sanatoriya No.11 Pyatigorskogo kurorta (glavnyy vrach S.V. Ivanov, nauchnyy rukovoditel' - prof. S.M. Petelin).
(ARTERIES--DISEASES)
(BATHS)
(ELECTROPHORESIS)

BYKOVA, N. A.

"Reaction of the Abatement of Rash in Scarlet Fever Diagnosis," Pediatrics, No. 2, 1949.

Clinic of Children's Infections, Ivanovo State Med. Inst., Ivanovo 1st Municipal Hospital

BYKOVA, N.A.

SEROV, V.V.; BYKOVA, N.A.

All-Union conference of pathoanatomists. Arkh.pat. 17 no.1:84-90 Ja-Mr '55. (MLRA 8:10)
(PATHOLOGY, in Russia, conf.)

BYKOVA, N.A.; ZHEBRO, T.F.; SKROV, V.V.; SHAPIRO, I.M.

Method of angioroentgenography in pathological anatomy. Arkh. pat. 17 no.3:71-72 Jl-S '55. (MLRA 8:12)

1. Iz kafedry patologicheskoy anatomii (zav.-chlen-korrespondent AMN SSSR prof. A.P.Strukov) I Moskovskogo ordena Lenina meditsinskogo instituta.
(ANGIOGRAPHY, in pathol.)
(PATHOLOGY, angiography in)

BYKOVA, N. A.

Bykova, N. A.

"The State of the vessels of the spleen in infarct." First Moscow Order of Lenin Medical Inst imeni I. M. Sechenov. Moscow, 1956. (Dissertation for the degree of Candidate in Medical Sciences)

Knizhnaya letopis'
No. 35, 1956. Moscow

BYKOVA, N.A.; ZHEBRO, T.F.; SEROV, V.V. (Moskva)

Role of thrombosis and embolism in the development of infarcts (statistical data based on autopsy material of the Sechenov First Moscow Medical Institute. Arkh. pat. 21 no.9:29-35 '59. (MIRA 14:8)

1. Iz kafedry patologicheskoy anatomii (zav. - chlen-korrespondent AMN SSSR prof. A.I.Strukov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M.Sechenova.

(THROMBOSIS) (EMBOLISM) (INFARCTION)

GLADKOVA, M.A.; BYKOVA, N.A.; MILAYEVA, M.A.; KARYAKIN, A.V.

Luminescence study of transplanted Brown-Pearce tumors in rabbits. Vop.onk. 7 no.5:41-46 '61. (MIRA 15:1)

1. Iz legochnogo otdeleniya (zav. - prof. N.I. Gerasimenko) i patomorfologicheskoy laboratorii (zav. - prof. Ya.L. Rapoport) Instituta grudnoy khirurgii AMN SSSR (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akad. A.N. Bakulev).
(SKIN--CANCER)

BYKOVA, N. A.; PRONIN, V. I.

Bronchogenic cysts of the esophagus. Grud. khir. no.2:86-88 '62. (MIRA 15:4)

1. Iz otdeleniya khirurgii pishchevoda (zav. - doktor meditsinskikh nauk Yu. Ye. Berezov) i laboratorii patomorfologii (zav. - prof. Ya. L. Rapoport) Instituta grudnoy khirurgii (dir. - prof. S. A. Kolesnikov, nauchnyy rukovoditel' - akad. A. N. Bakulev) AMN SSSR.

(ESOPHAGUS--TUMORS) (CYSTS)

BEREZOV, Yu.Ye.; BYKOVA, N.A.; YUPATOV, S.I.

Bypass anastomoses in inoperable tumors of the esophagus and cardia. Nov.khir.arkh. no.4:68-70 '62. (MIRA 15:5)

1. Otdeleniye khirurgicheskogo lecheniya zabolevaniy pishchevoda (zav. - doktor med. nauk Yu.Ye. Berezov) i patomorfologicheskaya laboratoriya (zav. - prof. Ya.L. Rapoport) Instituta grudnoy khirurgii AMN SSSR.
(ESOPHAGUS—SURGERY) (STOMACH—SURGERY)

PRONIN, V. I.; BYKOVA, N. A.

Case of primary-multiple cancer of the esophagus. Vop. onk. 8 no.7:90-92 '62. (MIRA 15:7)

1. Iz otdeleniya khirurgii pishchevoda (zav. - d-r med. nauk Yu. Ye. Berezov) i laboratorii patomorfologii (zav. - prof. Ya. L. Rapoport) Instituta grudnoy khirurgii (dir. - prof. S. A. Kolesnikov, nauch. rukov. - akad. A. N. Bakulev) AMN SSSR.

(ESOPHAGUS—CANCER)

RAPOPORT, Ya.L.; ARKHANGEL'SKAYA, N.V.; BYKOVA, N.A.; GENIN, N.M.

Pathomorphological changes in the mitral valve at various periods after commissurotomy. Grud.khir. 4 no.6:17-22 N-D '62 (MIRA 16:10)

1. Iz laboratorii patomorfologii (zav. - prof. Ya.L.Rapoport) i otdeleniya priobretennykh porokov serdtsa (zav. - prof. S.A. Kolesnikov) Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A.Kolesnikov; nauchnyy rukovoditel' - akademik A.N. Bakulev) AMN SSSR. Adres avtorov: Moskva, V-49, Leninskiy prospekt, d.8, Institut serdechno-sosudistoy khirurgii AMN SSSR.

(MITRAL VALVE--DISEASES) (HEART--SURGERY)

DOBROVA, N.B.; BYKOVA, N.A.; POKROVSKIY, A.V.; DROGAYTSEV, A.D.

Alloplasty of blood vessels. Eksper. khir. i anest. 8 no.3: 41-44 My-Je'63 (MIRA 17:1)

1. Iz Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akademik A.N.Bakulev) AMN SSSR.

BADRETDINOV, R.Z.; BYKOVA, N.A.

Conditions for the appearance of Bronchopleural complications following pulmonary resection (clinico-anatomical studies). Grudn. khir. 4 no.5:85-90 S-O'62 (MIRA 17:3)

1. Iz Instituta serdechno-sosudistoy khirurgii (dir. - prof. S.A. Kolesnikov, nauchnyy rukovoditel' - akademik A.N. Bakulev) AMN SSSR. Adres avtora: Podol'sk, Trudovaya, ul., d. 32/3, Gospital' invalidov Otechestvennoy voyny.

BYKOVA, N.A.; DOBROVA, N.B.

Indices of the biological inactivity of synthetic materials for vascular prostheses; according to morphological data. Vestn. Akad. med. nauk SSSR 18 no.7:71-78 '63 (MIRA 17:2)

1. Laboratoriya po peresadke organov i tkaney AMN SSSR i Institut serdechno-sosudistoy khirurgii AMN SSSR.

L 20269-65 AMD
ACCESSION NR: AR4045870 S/0299/64/000/014/M024/M024

SOURCE: Ref. zh. Biologiya. Svodny*y tom, Abs. 14M159

AUTHOR: Kirpatovskiy, I. D.; By*kova, N. A.; Kulik, V. P.; Cherkasova, M. Ye.

TITLE: Total transplantation of a small intestine as a new mode of vital organ transplantation

CITED SOURCE: Sb. 3 Vses. konferentsiya po peresadke tkaney i organov, 1963. Yerevan, 1963, 343-344

TOPIC TAGS: dog, transplantation, autotransplantation, intestine, homotransplantation, blood circulation, regional lymph node

TRANSLATION: In an experiment on dogs, three basic modes of small intestine transplantation have been developed: total autotransplantation, total homotransplantation, and implantation of a second supplementary intestine. On the basis of 22 operations and investigation of 20 control animals, the permissable time limits that a small intestine can be excluded from blood circulation were

Card 1/2

L 20269-65
ACCESSION NR: AR4045870

determined. The intestine transplant was connected to the vascular system by 4 methods: by connection to the renal artery, by connection to the vascular pedicle of the spleen, by connection to the superior mesenteric artery, and by connection with a prothesis of the mesenteric transplant artery to the abdominal aorta. Venous flow was directed into the portal system either through the superior mesenteric vein or through the splenic vein. Intestinal anastomoses modified by Kirpatovskiy were placed on the 2 ends of the intestinal tract. Life of a transplant after total homotransplantation is 1.5 mos. After animal death the intestine macroscopically appeared viable. Histologically the entire intestinal epithelium was dead, basal membranes were exposed, and hyperplasia of the lymph intramural system and regional lymph nodes was found, and with homotransplantation a sharp increase of lymph nodes was found along the portal vein course.

SUB CODE: LS ENCL: 00

Card 2/2

L 20264-65 AMD
ACCESSION NR: AR4045771 S/0299/64/000/013/M017/M017

SOURCE: Ref. zh. Biologiya. Svodnyy tom, Abs. 13M109

AUTHOR: Teryayev, V. G.; Govallo, V. I.; Bykova, N. A. B

TITLE: Experimental thyroid gland transplantation 2

CITED SOURCE: Sb. 3 Vses. konferentsiya po peresadke tkaney i organov, 1963. Yerevan, 1963, 467-468

TOPIC TAGS: thyroid gland, transplantation, homotransplantation, dog, autotransplantation, immune reaction

TRANSLATION: Eighty-seven dogs received transplants of 1 thyroid gland lobe (58 homotransplantations and 29 autotransplantations). The second lobe of the recipient's own thyroid gland was removed (with the exception of a few cases). Transplantation was accomplished with and without using a vascular pedicle. Thyroid gland structural changes, penetrability of vessels in the pedicle, and capacity of transplant to absorb I131 were investigated on the 10th, 20th, and 35th days following transplantation. Dynamics of basal metabolism

Card 1/2

L 20264-65
ACCESSION NR: AR4045771

and immunological reactivity of the organism were investigated in 25 dogs. In transplantation without using a vascular pedicle, the process of resorption and replacement of thyroid gland tissue with connective tissue started shortly after transplantation both in homo- and autotransplants. This process started later in transplants with a vascular pedicle. Thrombosis of arterial and venous vessels developed in all homotransplantations. Not a single case of throm- bosis was found in autotransplants with a vascular pedicle, which allows the author to conclude that thrombosis is not related to operation technique but to tissue incompatibility reaction. Thyroid gland transplantation with a vascular pedicle produces better condi- tions for transplant accretion, but does not eliminate the incompati- bility reaction and accompanying effects.

SUB CODE: LS ENCL: 00

Card 2/2

BYKOVA, N.A., kand. med. nauk (Moskva)

Scientific conference on the problems of immunopathology.
Arkh. pat. 26 no.2:90-94 '64. (MIRA 17:8)

BYKOVA, N.A.; DOBROVA, N.B. (Moskva)

Morphogenesis and morphology of the capsule of vascular prostheses of synthetic materials; experimental study. Arkh. pat. 26 no.12:39-45 '64. (MIRA 18:5)

1. Laboratoriya po peresadke organov i tkaney (zav. - deystvitel'nyy chlen AMN SSSR prof. V.V.Kovanov) AMN SSSR, Institut serdechno-sosudistoy khirurgii (dir. - prof. S.A.Kolesnikov, nauchnyy rukovoditel' - akademik A.N.Bakulev) AMN SSSR.

BYKOVA, N.A.

Causes of the death of dogs following replantation of an extremity; preliminary report. Trudy 1-go MMI 42:30-37 '65.
(MIRA 19:2)

1. Laboratoriya po peresadke organov i tkaney AMN SSSR.

KIRPATOVSKIY, I.D.; OKSMAN, T.M.; BYKOVA, N.A.

Vascular anastomoses in the autotransplantation of an extremity.
Trudy 1-go MMI 42:38-43 '65. (MIRA 19:2)

1. Laboratoriya po peresadke organov i tkaney AMN SSSR.

BYKOVA, N.A.; KULIK, V.P.

Regeneration of the esophagus following resection under conditions of a temporary application of prosthesis. Trudy 1-go MMI 42:287-295 '65. (MIRA 19:2)

1. Laboratoriya po peresadke organov i tkaney AMN SSSR.

BYKOVA, N.A.; DOBROVA, N.B.

Morphology of the capsule of synthetic vascular prosthesis during its formation and at late dates. Trudy 1-go MMI 42: 243-250 '65. (MIRA 19:2)

1. Laboratoriya po peresadke organov i tkaney AMN SSSR i Institut serdechno-sosudistoy khirurgii AMN SSSR.

ACC NR: AR6034651 SOURCE CODE: UR/0299/66/000/008/M019/M019

AUTHOR: Bykova, N. A.; Kulik, V. P.

TITLE: Regeneration of the esophagus after resection in conditions of temporary application of prosthesis (Experimental research)

SOURCE: Ref. zh. Biologiya, Part II, Abs. 8M113

REF SOURCE: Tr. 1-go Mosk. med. in-ta, v. 42, 1965, 287-295

TOPIC TAGS: medicine, medical research, surgery, esophagus, esophagus regeneration, prosthesis

ABSTRACT: Sectors of the esophagus 3 to 10 cm long in 176 dogs were replaced by prosthesis made of polyethylene, polyvinyl chloride and catgut with a prolonged resorption time. The prosthesis were joined by sutures to the esophagus ends. Hystomorphologic examination was carried out after 2 to 6 weeks and after 3 to 4 months. A capsul pertaining to connecting tissues and made of collagenous and elastic longitudinally oriented fibers with small neural truncus ingrowing in the capsule developed around the prosthesis. The inner surface of the capsule

Card 1/2 UDC: 591.169

ACC NR: AR6034651

became covered with a multilayer epithelium. The long stay of the prosthesis in the lumen of the esophagus delayed the development of the capsule which did not come into contact with the prosthesis. Against the background of the delayed maturation of the capsule, its ulceration and decubitus ulcers at the extremities of the esophagus were noted. Maturation of the capsule in the presence of the prothesis took place without lessening of the diameter of the lumen of the esophagus, but the length of the newly formed segment was shorter than that of the resected sector. In a number of cases, maturation of the capsule without prosthesis was accompanied by a narrowing of the lower part of the lumen of the capsule. The relationship of the degree of narrowing of the esophagus with the time of removal of the prosthesis was not following a regular pattern. Favorable results of the formation of the capsule were obtained in cases of natural casting off of the prosthesis after complete aperture of the fixative sutures, usually between 3 and 7 weeks after the operation (acceptable period for removal of resorption of a prosthesis). The author perfers the use of monolithic prosthesis. When using prosthesis made of net, the tissues of the organism grow into the material, which causes a proliferative and giant-cellular reaction, disorder in the structure of the esophagus walls and disengagement and ulceration of the mucuous membrane of the esophagus. [Translation of abstract] [GC]

SUB CODE: 06/

Card 2/2

TAGER, A.A.; PASHKOV, A.B.; TSILIPOTKINA, M.V.; BYKOVA, N.I.

High sorptive capacity of ion-exchange resins. Vysokom.soed. 2 no.7:997-1000 Jl '60. (MIRA 13:8)

1. Ural'skiy gosudarstvennyy universitet im. A.M.Gor'kogo i Nauchno-issledovatel'skiy institut plasticheskikh mass.
(Adsorption) (Resins, Synthetic)

BYKOVA, N.K.

Materials on the paleoecology of foraminifera of the Suzak strata of the Paleogene of Fergana Valley. Trudy VNIGRI no.73: 207-295 '53. (MLRA 7:7)
(Fergana--Foraminifera, Fossil) (Foraminifera, Fossil--Fergana)

BYKOVA, N.K.; SIMAKOV, S.N.

Paleogene of Zevar. Trudy VNIGRI no.95:129-135 '56. (MLRA 9:12)

(Gissar Range--Geology, Stratigraphic)

BYKOVA, N.K.; BALAKHMATOVA, V.T.; VASILENKO, V.P.; VOLOSHINOVA, N.A.; GRIGELIS, A.; DAIN, L.G.; IVANOVA, L.V.; KUZINA, V.I.; KUZNETSOVA, Z.V.; KOZYREVA, V.F.; MOROZOVA, V.G.; MYATLYUK, Ye.V.; SUBBOTINA, N.N.

New genera and species of Foraminifera. Trudy VNIGRI no.115:5-106 '58. (MIRA 11:10)

(Foraminifera, Fossil)

BYKOVA, N.K.

Principles underlying the establishment of some genera of the families Buliminidae and Bolivinitidae. Trudy VNIGRI no.115: 225-231 '58. (MIRA 11:10)

(Foraminifera, Fossil)

BYKOVA, N.K.

Material on the paleoecology of Foraminifera from the Alay and Turkestan stages of the Paleocene in the Fergana Valley. Trudy VNIGRI no.136:544-613 '59. (MIRA 13:4)
(Fergana Valley--Foraminifera, Fossil)

BYKOVA, N.K.

Cyclic recurrence of the phyletic development in Foraminifera.
Trudy VNIGRI no.163:309-336 '60. (MIRA 14:6)
(Foraminifera, Fossil)

BYKOVA, N.K.; AZBEL', A.Ya.

Stratigraphic correlation of Maikop sediments in the Buzachi Peninsula based on foraminifers. Trudy VNIGRI no.190:375-397 '62. (MIRA 16:1)
(Buzachi Peninsula—Geology, Stratigraphic)
(Buzachi Peninsula—Foraminifera, Fossil)

SALAMANDRA, G.D.; FEDOSEYEVA, I.K.; BYKOVA, N.M.

Measuring gas velocity behind a shock wave. Inzh.-fiz. zhur. 7 no.5: 96-99 My '64. (MIRA 17:6)

1. Energeticheskiy institut imeni G.M. Krzhizhanovskogo, Moskva.

ACCESSION NR: AP4038004 S/0170/64/000/005/0096/0099

AUTHOR: Salamandra, G. D.; Fedoseyeva, I. K.; By*kova, N. M.

TITLE: Measuring gas velocity behind a shock wave

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 5, 1964, 96-99

TOPIC TAGS: gas flow velocity, shock wave, subsonic gas flow, shock wave propagation, flow velocity measurement, gas flow

ABSTRACT: A method has been developed for measuring subsonic gas velocities behind a shock wave in a shock tube. The gas velocity was measured by two independent methods: by measuring the velocity of thermal inhomogeneities formed by spark discharge in the gas moving behind a shock wave, and by determining the velocity of sound waves generated by spark discharge in the gas flow behind the wave. The high-pressure chamber of the shock tube was filled with a stoichiometric hydrogen-oxygen mixture at a pressure of 61318 n/m^2, and the low-pressure chamber, with nitrogen at 78647 n/m^2.

Card 1/2

ACCESSION NR: AP4038004

The distance between the contacts for spark discharge was selected in such a way that the "traces" would appear in the medium already brought in motion by the shock wave. By processing of time-resolved photographs, the motion of the gas and sound waves propagating co- or countercurrently to the flow can be determined, and the gas velocity calculated. The experiments have shown that gas velocities determined by the two methods differ by 2—3%. Gas velocities in the range from 173 to 286 m/sec were measured by the methods behind a shock wave propagating at M = 1.72. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Energeticheskiy institut im. G. M. Krzhizhanovskogo, Moscow (Power Engineering Institute)

SUBMITTED: 16Feb63 DATE ACQ: 09Jun64 ENCL: 00

SUB CODE: ME NO REF SOV: 005 OTHER: 006

Card 2/2

BYKOVA , N. O.

BYKOVA, N. O.
Book: "The Influence of Variable Frequency Potential on Resonance Systems"
18 pages 4 rubles
Bureau of New Technic "NATT" (MINISTERSTVO AVTOMOBIL'NOI PROMYSHLENNOSTI)
New Books - In ELEKTRICHESTVO APRIL 1949

Immediate source ER

VEL'TISHCHEV, Yu.Ye.; MASHKEYEV, A.K.; MIRZOYEV, B.M.; BYKOVA, N.S.

Method of determining inulin and sugar in the blood by means of the antrhone reagent. Lab.delo 9 no.3:30-34 Mr '63. (MIRA 16:4)

1. Kafedra pediatrii (zav. - deystvitel'nyy chlen AMN SSSR prof. G.N.Speranskiy) TSentral'nogo instituta usovershenstvovaniya vrachey i laboratoriya akademika A.G.Speranskogo pri Institute vysshey nervnoy deyatel'nosti i neyrofiziologii AMN SSSR.

(INSULIN) (BLOOD SUGAR) (ANTHRONE)

USSR/Soil Science - Soil Genesis and Geography. J

Abs Jour : Ref Zhur Biol., No 19, 1958, 86708

Author : Bykova, N.V.

Inst : Moscow Agriculture Academy im. K.A. Timiryazev

Title : Soils of the Amu-Dar'ya River Lowland.

Orig Pub : Dokl. Mosk. s.-kh. akad. im. K.A. Timiryazeva, 1957, vyp. 29, 276-280

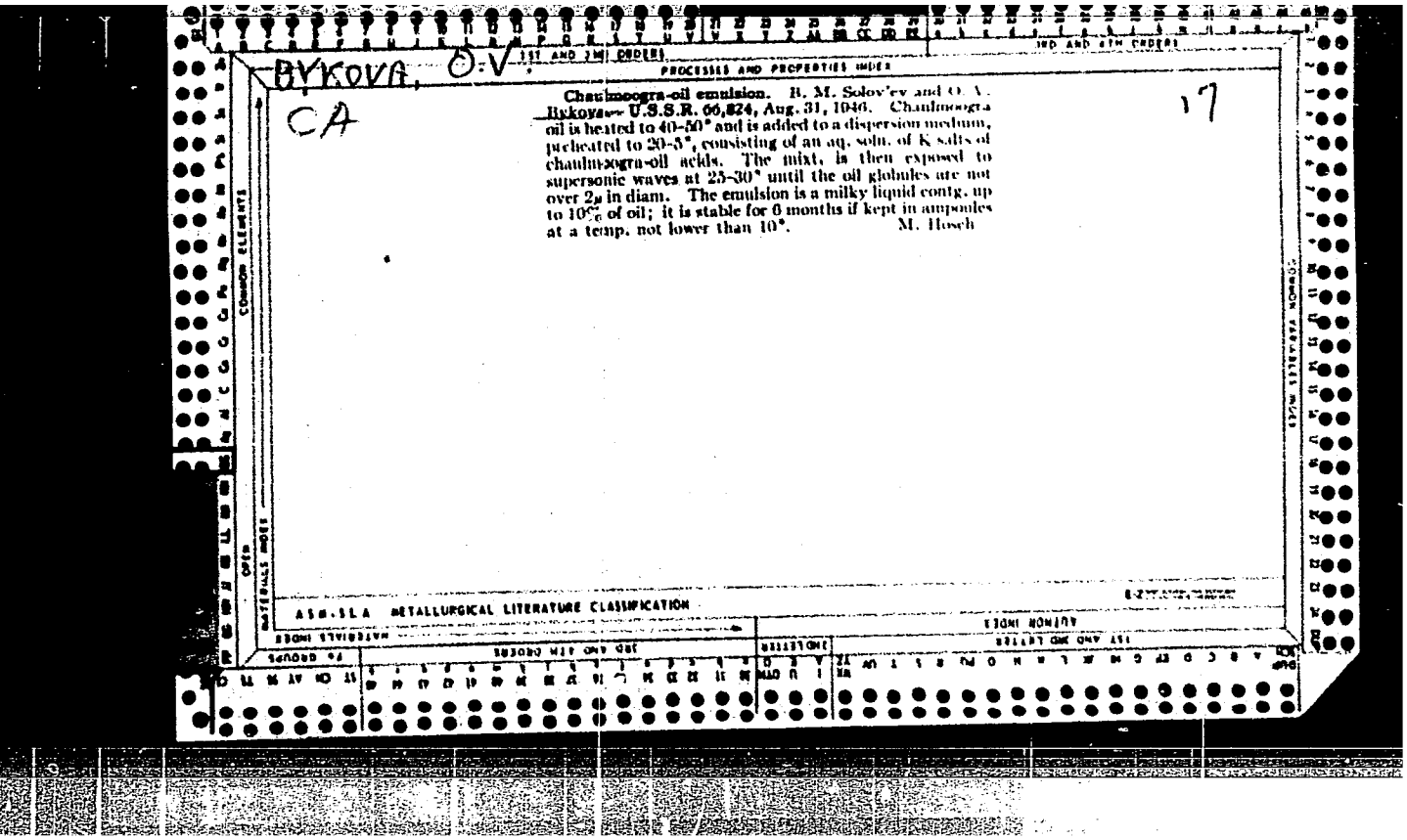
Abstract : The dindings are given of an investigation of the Amu-Dar'ya lowland by the "Agrolesoproyekta" (Agricultural Forestation Project) of the Ministry of Agriculture in 1951-1953. The soil cover of the territory described is represented by alluvial-meadow flood-plain (tugay) soils, meadow light, meadow desert, desert grey-brown, takyr-like irrigated saline and non-saline soils and solonchaks. The data are examined of determinations of the humus

Card 1/2

Abs Jour : Ref Zhur Biol, No 19, 1958, 86708

content in the soils, of water-soluble salts and the mechanical composition of the soils. -- M.D. Rudakov

BYKOVA, N. V.: Master Agric Sci (diss) -- "Soils of the lower reaches of the river Amu-Dar'ya (within Kuybyshevskiy, Khodzheylinskiy, and Shumanayskiy administrative rayons of the Kara-Kalpak ASSR and Kun'-Urgenchskiy Rayon of the Turkmen SSR)". Moscow, 1958. 14 pp (Moscow Order of Lenin Agric Acad im K. A. Timiryazev), 110 copies (KL, No 6, 1959, 137)



BYKOVA, O. V.

CA

17

PROCESSES AND PROPERTIES INDEX

Chaulmoogra-oil emulsion. B. M. Solov'ev and O. V. Bykova. U.S.S.R. 66,824, Aug. 31, 1946. Chaulmoogra oil is heated to 40–50° and is added to a dispersion medium, preheated to 20–5°, consisting of an aq. soln. of K salts of chaulmoogra-oil acids. The mixt. is then exposed to supersonic waves at 25–30° until the oil globules are not over 2μ in diam. The emulsion is a milky liquid contg. up to 10% of oil; it is stable for 6 months if kept in ampoules at a temp. not lower than 10°. M. Hosch

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Bykova, O.V.

4
1. 4E2c
May

1818. Method of producing an active filler for rubber mixes. O. V. Bykova and V. M. Solov'ev [illegible]
3 [illegible] 1957 No. [illegible] 491 [illegible]

RM
[illegible]

BYKOVA, O.V.; DUBINKER, Yu.B.; YERSHOVA, A.I.

Statistical evaluation of the quality of natural rubber. Kauch. i rez. 20 no.8:12-16 Ag '61. (MIRA 14:8)
(Rubber)

LEUTSKIY, K.M., prof., otv. red.; KALYUZHNYY, I.F., dots., red.; LISHCHENKO, N.A., dots., red.; BYKOVA, O.Ye., kand. filol. nauk, red.; GOROKHOVA, Z.N., dots., red.; TOKMAKOV, A.I., dots., red.; DOMBROVSKIY, A.V., dots., red.; BELYAYEV, N.G., dots., red.; LYUBOPYTNOVA, V.S., dots., red.; MUZYCHKO, G.I., tekhn. red.

[Science yearbooks for 1957] Nauchnyi ezhegodnik za 1957 god. Chernovtsy, Chernovitskii gos. univ., 1958. 522 p. (MIRA 16:10)

1. Czernowitz. Universytet. 2. Rektor Chernovitskogo gosudarstvennogo universiteta (for Leutskiy).
(Science--Yearbooks)
(Social sciences--Yearbooks)

BEREZOVSKIY, B.A.; BYKOVA, R.T.; GRIGOROVICH, Ye.V.; KAPITOVA, R.M.; SHRAMKO, L.I.

Treatment of tuberculosis with phthivazid. Vrach.delo no.12:1307 D '56. (MIRA 12:10)

1. Kafedra fakul'tetskoy terapii (zav. - prof.B.S.Shklyar) Vinnitskogo meditsinskogo instituta i Vinnitskiy oblastnoy tuberkuleznyy gospital'.
(TUBERCULOSIS) (NICOTINIC ACID)

S/081/62/000/005/109/112
B168/B101

15.9200

AUTHORS: Zakharov, N. D., Bykova, S. A.

TITLE: Non-sulfur vulcanization of certain synthetic rubbers

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1962, 648, abstract 5P323 (Uch. zap. Yaroslavsk. tekhnol. in-ta, v. 6, 1961, 121-130)

TEXT: The properties of vulcanized rubbers and the process of vulcanization of nitrile rubbers with various inorganic bases (NaOH, KOH, $Ca(OH)_2$, $Ba(OH)_2$) were investigated. The rate of cross-linking increases with the percentage of nitrile groups in the raw rubber and with the vulcanization temperature. The process is accelerated in the presence of 5 parts by weight of substances, such as water, starch or glucose, containing OH. A variation in the proportion of the base has a particularly noticeable effect in the case of NaOH. If the proportion of NaOH is raised to 10 parts by weight vulcanized rubbers of type СКН-40 (SKN-40) with a breaking

Card 1/2

strength > 250 kg/cm^2 are obtained in a vulcanization time of 15 min. Acceleration of the cross-linking process compared with heat vulcanization in the presence of bases takes place in unfilled and filled vulcanized rubbers. Rubbers produced with bases occupy an intermediate position, as far as their properties are concerned, between sulfur-vulcanized and heat-vulcanized rubbers. The moduli, frost resistance, and resistance to heat aging are higher in these vulcanized rubbers than in the sulfur-vulcanized or heat-vulcanized products of the corresponding raw rubbers. Polybutadiene rubbers do not cross-link under the action of bases; butadiene/styrene rubber does cross-link, but less than nitrile rubbers. [Abstracter's note: Complete translation.]

ZAKHAROV, N.D.; Prinimali uchastiye: BYKOVA, S.A.; KISELEVA, V.I.; KISELEVA, N.I.; KRYLOVA, N.O.; MAKAROVA, L.V.

Nonsulfur vulcanization of some synthetic rubbers. Part 4: Effect of the nitrile group content on the thermal vulcanization of butadiene nitrile rubbers. Vysokom.soed. 5 no.8:1190-1195 Ag '63. (MIRA 16:9)

1. Yaroslavskiy tekhnologicheskiy institut.
(Rubber, Synthetic) (Vulcanization)
(Nitrile rubbers)

KALININA, T.V.; BYKOVA, S.M.

Suturing the intestines end-to-side using an apparatus from the Research Institute for Experimental Surgical Apparatus and Instruments. Trudy NIIEKHAI no.5:97-100 '61. (MIRA 15:8)

1. Nauchno-issledovatel'skiy institut eksperimental'noy khirurgicheskoy apparatury i instrumentov.
(INTESTINES--SURGERY) (SUTURES)

ANTKIN, A.G.; DUGACHEVA, G.M.; FRESNYAKOVA, V.N.; BYKOVA, S.P.

Zone melting of methyl methacrylate. Zhur. fiz. khim. 36 no.9:2074-2075 S '62. (MIRA 17:6)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

ANIKIN, A.G.; BYKOVA, S.F.; CHISTYAKOV, V.F.

Method for monomer purification by zone melting in a dry chamber. Plast. massy no.2:73-74 '64. (MIRA 17:8)

ARSEN'YEVA, N.P., inzh.; BYKOVA, S.P., inzh.; GARBER, V.I., inzh.

Relay-protection diagrams for operational alternating current. Elek. sta. 28 no.12:76-78 D '57. (MIRA 12:3)
(Electric relays)

S/076/62/036/009/009/011
B101/B102

AUTHORS: Anikin, A. G., Dugacheva, G. M., Presnyakova, V. M., and Bykova, S. P.

TITLE: Zone melting of methyl methacrylate

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 9, 1962, 2074 - 2075

TEXT: The use of zone melting to purify low-melting organic substances is described by the example of methyl methacrylate (crystallization temperature -10.5°C) with an initial purity of 99.2%. The zone melting was performed in a tinplate bath 80 mm long inside a Dewar flask containing liquid nitrogen, by heating a nichrome spiral of 0.5 mm diameter, heating current 4 amp with a shift of 1 cm/min. A degree of purity amounting to 99.9% was attained after five passages, and 99.95% after ten passages. The cryoscopic test for purity of the samples has been described earlier (Dokl. AN SSSR, 119, 933, 1958). Thus, it is established that organic substances crystallizing below 0°C can be purified by zone melting. There are 2 tables.

Card 1/2

Zone melting of ...

S/076/62/036/009/009/011
B101/B102

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

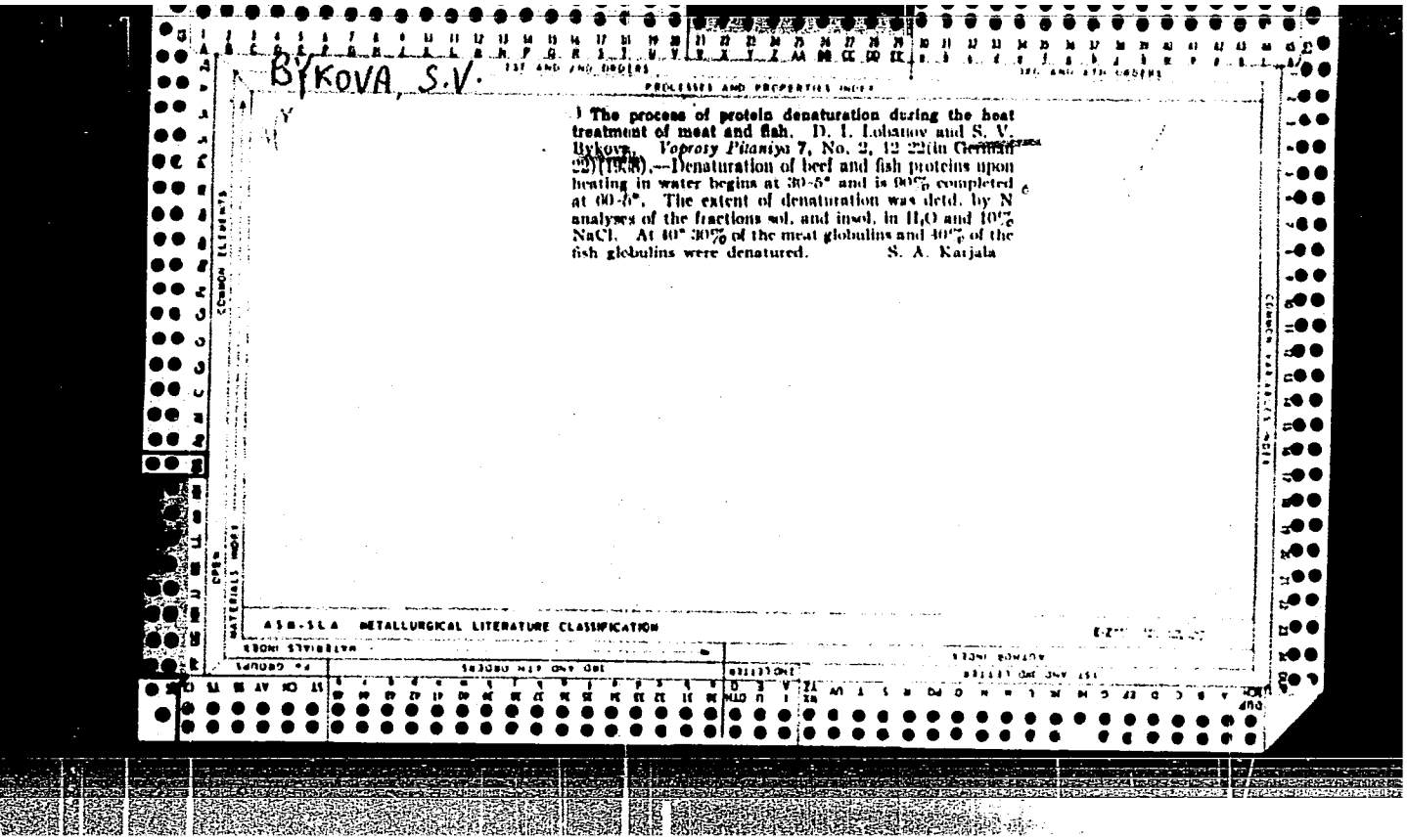
SUBMITTED: February 19, 1962

Card 2/2

BYKOVA, S.T.

Increasing the operative efficiency of filter presses in the manufacture of molasses. Sakh.prom. 37 no.11:61-63 N '63.
(MIRA 16:11)

1. Yaroslavskiy opornyy punkt TSentral'nogo nauchno-issledovatel'skogo instituta krakhmalo-patochnoy promyshlennosti.

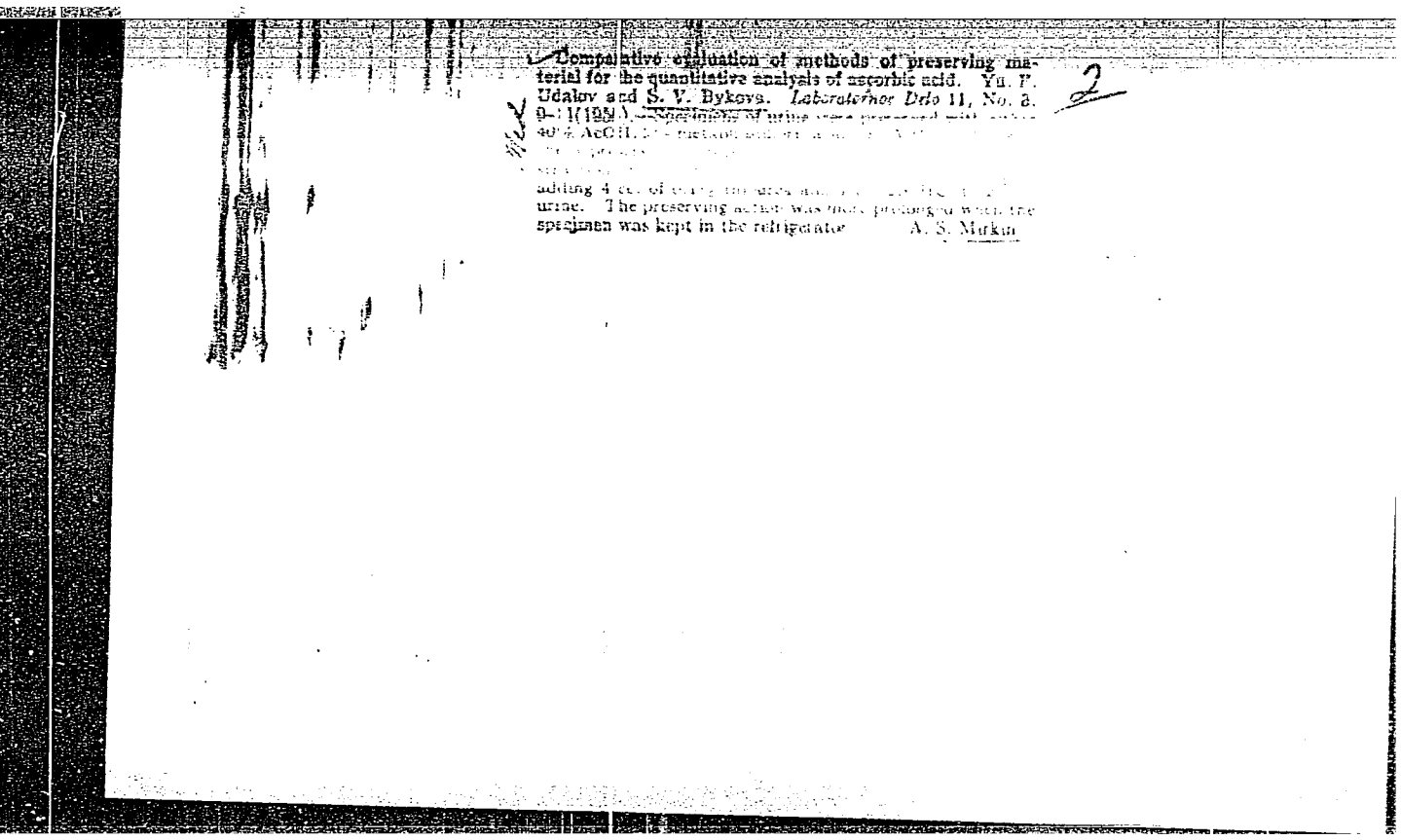


BYKOVA, S.V.

PROCESSES AND PROPERTIES INDEX

The process of protein denaturation during the heat treatment of meat and fish. D. I. Lobanov and S. V. Bykova. *Voprosy Pitaniya* 7, No. 2, 12-22 (in German 22) (1938).—Denaturation of beef and fish proteins upon heating in water begins at 30-5° and is 90% completed at 60-6°. The extent of denaturation was detd. by N analyses of the fractions sol. and insol. in H_2O and 10% NaCl. At 40° 30% of the meat globulins and 40% of the fish globulins were denatured. S. A. Karjala

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



Comparative evaluation of methods of preserving material for the quantitative analysis of ascorbic acid. Yu. F. Udalov and S. V. Bykova. *Laboratornoe Delo* 11, No. 8, 9–11(1965). Specimens of urine were preserved with [illegible] 40% AcOH, [illegible] adding 4 cc. of [illegible] urine. The preserving action was more pronounced when the specimen was kept in the refrigerator. A. S. Markin

STAVROV, O.D.; BYKOVA, T.A.

Distribution characteristics of a series of rare and volatile elements in rocks and pegmatites of the Korosten' pluton. Geokhimiia no.4:328-331 '61. (MIRA 14:5)

1. All-Union Scientific Research Institute of Mineral Raw Materials, Moscow.

(Korosten' region—Rocks)
(Lithium)
(Rubidium)
(Fluorine)

PERVUSHIN, Sergey Alekseyevich, prof.; RACHKOVSKIY, Solomon Yakovlevich, prof.; BYKOVA, Tat'yana Dmitriyevna, dots.; GOL'BRAYKH, Samuil Yakovlevich, dots.; MALINOVA, Revekka Davidovna, dots.

[Economics of nonferrous metallurgy in the U.S.S.R.] Ekonomika tsvetnoi metallurgii SSSR. Izd.2., dop. i perer. Moskva, Metallurgiia, 1964. 412 p. (MIRA 18:1)

BYKOVA, T. T.

"Serological Typing of Dysentery Bacilli of the Hiss-Flexner Group in the City of Izhevsk." Cand Med Sci, Leningrad Sanitary Hygiene Medical Inst, Min Health RSFSR, Leningrad, 1955. (KL, No 8, Feb 55)

SO: Sum. No. 631, 26 Aug 55 - Survey of Scientific and Technical Dissertation Defended at USSR Higher Educational Institutions (14)

LENSKIY, M.A.; BYKOVA, T.D., dotsent.

"Methods of cost analysis in the mining industry." M.IA.Savarovskii. Reviewed by M.A.Lenskii, T.D.Bykova. Gor.zhur.no.8:61-63 Ag '56. (MLRA 9:10)

1.Nachal'nik planovogo otdela rudoupravleniya Degtyarmed'ruda (for Lenskiy).

(Mining engineering--Costs) (Savarovskii, M.IA.)

SOV/137-58-10-20659

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 48 (USSR)

AUTHOR: Bykova, T.D.

TITLE: Dynamics of Nonferrous Metals Recovery and Production in the Capitalist Countries (1929-1956) [Dinamika dobychi i proizvodstva tsvetnykh metallov v kapitalisticheskikh stranakh (1929-1956 gg.)]

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Tsvetn. metallurgiya, 1958, Nr 1, pp 171-182

ABSTRACT: A review of statistical data on the recovery and production of nonferrous metals in the capitalist countries, showing the dynamics of production and the advances made in this branch of industry in relation both to the absolute level of production of individual metals and to the share of individual capitalist countries in the production of nonferrous metals, and also to the geographic distribution of the production thereof, and of raw materials production. Bibliography: 7 references.

Card 1/1 1. Metals--Production 2. Metals--Recovery 3. Data --Statistical analysis B.L.

Association: Moskovskiy institut tsvetnykh metallov i zolota. Kafedra ekonomiki promyshlennosti.

BYKOVA, T. D

PHASE I BOOK EXPLOITATION SOV/4072

Pervushin, Sergey Alekseyevich, Solomon Yakovlevich Rachkovskiy, Samuil Yakovlevich Gol'braykh, Revekka Davydovna Malinova, and Tat'yana Dmitriyevna Bykova.

Ekonomika tsvetnoy metallurgii SSSR (Economic Aspects of Nonferrous Metallurgy of the USSR). Moscow, Metallurgizdat, 1960. 516 p. Errata slip inserted. 3,500 copies printed.

Eds.: S. A. Pervushin and S. Ya. Rachkovskiy; Ed. of Publishing House: R. F. Avrutskaya; Tech. Ed.: Ye. B. Vaynshteyn.

PURPOSE: This textbook is for students of the special course "Economics and Organization of the Metal Industry" at Institutes of Higher Education. In addition, it may be useful to workers in scientific research and planning institutes, and also to personnel working in the nonferrous metal industry.

COVERAGE: The book discusses the role of the nonferrous metal industry as one of the most important branches of Soviet national economy, its interrelations with other branches of industry, the basic laws of its development, its patterns of consumption, and the fields of application of various nonferrous metals. Also discussed are the basic tendencies of development of nonferrous metallurgy in capitalistic countries and in peoples' democracies. The book

Card 1/14

deals with fundamental economic problems of the nonferrous metal industry, its planning, technical progress and technological developmental trends, the raw-material base of the industry, the distribution of operating plants and plants under construction, basic capital assets and turnover assets, personnel, the operating efficiency of plants, the manufacturing cost, and the supply of technical materials. Particular attention is paid to problems of capital construction and the planning of plants, to methods for determining the efficiency of capital construction, and to the introduction of novel techniques. The authors thank A. Kh. Benuni , Professor at the Ural (Sverdlovsk) Polytechnical Institute, and Docent M. S. Golynskiy, specialist in the State Planning Committee of the Council of Ministers of the USSR. There are 33 references, all Soviet.

TABLE OF CONTENTS:

S/096/62/000/011/003/006
E193/E383

AUTHORS: Neymark, B.Ye., Candidate of Technical Sciences and Bykova, T.I., Technician

TITLE: The effect of heat-treatment on heat-conductivity, electrical-resistivity and Lorenz number of low-alloy chromium-molybdenum steels

PERIODICAL: Teploenergetika, no.11, 1962, 54-58

TEXT: Although the heat-conductivity, electrical-resistivity and Lorenz number of low-carbon steels such as Ст.15 (St.15) are practically independent of heat-treatment, this may not be true in respect of low-alloy steels with a similar carbon content which are used as construction materials for boiler installations in power-generating plants; hence the present investigation conducted on steels 12Х1МФ (12Kh1MF), 12Х2МФСР (12Kh2MFSR), 15Х2М2ФБС (15Kh2M2FBS), 20ХМ (20KhM) and 20Х1М1Ф1 (20Kh1M1F1), containing 0.1 to 0.24% C, 0.17 to 1.1% Si, 0.36 to 0.70% Mn, 0.23 to 1.3% Cr, 0.3 to 1.34% Mo, 0.16 to 0.98% V and (in the case of steel 15Kh2M2FBS) 0.14% Cu and 0.15% Nb. All the measurements were carried out in vacuum of

Card 1/3

10^{-4} mm Hg at temperatures ranging from 20 to 1000°C. The effect of the following heat-treatments was examined: 1) hardening; 2) hardening and tempering; 3) normalizing and tempering. Typical results are reproduced in Figs.1 and 3. In Fig.1, points 1,2 and 3 relate to specimens in (1) the normalized and tempered, (2) hardened and tempered and (3) hardened condition. In Fig.3 the electrical resistivity (ρ x $10^8 \Omega$m, lefthand scale), heat-conductivity (λ, W/m°C, top righthand scale) and Lorenz number (L x 10^8, $v^2/(°K)^2$, bottom righthand scale) of steel 12Kh1MF are plotted against the test temperature (°C). In Fig.3a the electrical-resistivity (ρ x $10^8 \Omega$m) of normalized and tempered steel 15Kh2M2FBS at 0°C is plotted against time (hours) of ageing at 585°C (dots) and 630°C (circles). The starting points of curves 1 to 4 in Fig.3b represent the electrical resistivity (ρ x $10^8 \Omega$m) of the same steel at 0°C after the following heat-treatments: 1 - water-quenching from 1020 to 1040°C; 2 - oil-quenching from 1020 to 1040°C;

3 - normalizing at 1 020 - 1 040 °C (cooling in air);
4 - cooling in the furnace from 1 020 - 1 040 °C; The curves themselves represent a variation in ε of the appropriate specimens after tempering at 730 °C for periods (min) indicated on the horizontal axis. The general conclusions reached can be summarized as follows: a) heat-conductivity, electrical resistivity and Lorenz number of the steels studied in hardened and tempered condition are practically the same as those of normalized and tempered specimens; b) the properties of the steels in the hardened condition differ by 10 - 15% from those of the steels given a tempering treatment; this difference persists up to 100 °C; it decreases with increasing temperature and at 500 °C amounts to 2-3% only; c) as the total alloying-elements content of the steel increases its electrical-resistivity and Lorenz number increase and the heat-conductivity decreases. The difference between the values of these properties for steels of various compositions decreases with increasing temperature. There are 6 figures and 2 tables.

ASSOCIATION: Vsesoyuznyy teplotekhnicheskiy institut
(All-Union Heat-engineering Institute)

S/126/63/015/001/025/029
E073/E151

AUTHORS: Neymark, B.Ye., and Bykova, T.I.

TITLE: Influence of cold deformation and ageing on the thermal and electrical conductivities and the Lorentz number of austenitic chrome-nickel steels

PERIODICAL: Fizika metallov i metallovedeniye, v.15, no.1, 1963, 150-151

TEXT: The thermal conductivity, electrical resistivity, and Lorentz number of austenitic stainless steels containing up to 0.11% C, with Cr and Ni contents of 18/8, 14/14 and 15/20 and smaller amounts of other alloy elements were determined to accuracies of ±2%, ±5%, and ±1.5%, respectively. The steels were tested (a) work hardened by lathe turning followed by electrolytic polishing to remove the surface layer; (b) aged at 700 °C for either 500 hours or 2000 hours after (a); (c) cold-drawn after (b) with reductions of 10, 30 or 50%. The electrical resistivity of the work-hardened steels was within about 1% of the aged steels; cold reduction usually slightly increased the resistivity, the maximum increase being 4%. Similarly thermal

Card 1/2

Influence of cold deformation ... S/126/63/015/001/025/029
E073/E151

conductivity and Lorentz number were little affected, the maximum hardness change being about 10%. No simple relationship was found between the electrical conductivity, thermal conductivity or Lorentz number, and the time of ageing or the amount of deformation. The small effect of ageing and deformation was attributed to the low carbon content of the steels. There are 2 tables.

ASSOCIATION: Vsesoyuznyy teplotekhnicheskiy institut im. F.E. Dzerzhinskogo
(All-Union Heat Engineering Institute imeni F.E. Dzerzhinskiy)

SUBMITTED: April 17, 1962

Card 2/2

NEYMARK, B.Ye., kand.tekhn.nauk; BYKOVA, T.I., tekhnik

Effect of heat treatment on the heat conductivity, electric resistance and Lorenz number of low-alloy chromium-molybdenum steels. Teploenergetika 9 no.11:54-58 N '62. (MIRA 15:10)

1. Vsesoyuznyy teplotekhnicheskiy institut.
(Chromium-molybdenum steel—Testing)
(Steel—Heat treatment)

S/126/63/015/001/025/029
E073/E151

AUTHORS: Neymark, B.Ye., and Bykova, T.I.

TITLE: Influence of cold deformation and ageing on the thermal and electrical conductivities and the Lorentz number of austenitic chrome-nickel steels

PERIODICAL: Fizika metallov i metallovedeniye, v.15, no.1, 1963, 150-151

TEXT: The thermal conductivity, electrical resistivity, and Lorentz number of austenitic stainless steels containing up to 0.11% C, with Cr and Ni contents of 18/8, 14/14 and 15/20 and smaller amounts of other alloy elements were determined to accuracies of ±2%, ±5%, and ±1.5%, respectively. The steels were tested (a) work hardened by lathe turning followed by electrolytic polishing to remove the surface layer; (b) aged at 700 °C for either 500 hours or 2000 hours after (a); (c) cold-drawn after (b) with reductions of 10, 30 or 50%. The electrical resistivity of the work-hardened steels was within about 1% of the aged steels; cold reduction usually slightly increased the resistivity, the maximum increase being 4%. Similarly thermal

Card 1/2

Influence of cold deformation ... S/126/63/015/001/025/029
E073/E151

conductivity and Lorentz number were little affected, the maximum hardness change being about 10%. No simple relationship was found between the electrical conductivity, thermal conductivity or Lorentz number, and the time of ageing or the amount of deformation. The small effect of ageing and deformation was attributed to the low carbon content of the steels. There are 2 tables.

ASSOCIATION: Vsesoyuznyy teplotekhnicheskiy institut im. F.E. Dzerzhinskogo
(All-Union Heat Engineering Institute imeni F.E. Dzerzhinskiy)

SUBMITTED: April 17, 1962

Card 2/2

NEYMARK, B.Ye.; LYUSTERNIK, V.Ye.; ANICHKINA, E.Yu.; BYKOVA, T.I.

Thermophysical properties of nickel-chromium-iron alloys. Teplofiz. vys. temp. 1 no.1:12-16 Jl-Ag '63. (MIRA 16:10)

1. Teplotekhnicheskiy nauchno-issledovatel'skiy institut im. F.E. Dzerzhinskogo.

L 15251-65 EPF(n)-2/EPR/EPA(s)-2/EWG(v)/EWT(l)/EWT(m)/EWP(b)/EWA(d)/EWA(l)/EWP(w)/EWP(t) Pe-5/Ps-4/Pt-10/Pu-4 AEDC(a)/SSD/ASD(a)-5/AS(mp)-2/ASD(p)-3/IJP(c) MJW/JD

ACCESSION NR: AP4045909 S/0114/64/000/009/0031/0032

AUTHOR: Neymark, B. Ye. (Candidate of technical sciences); By*kova, T. I. (Technician

TITLE: Heat conductivity and electric resistance of titanium-base alloys

SOURCE: Energomashinostroyeniye, no. 9, 1964, 31-32

TOPIC TAGS: titanium base alloy, ATZ titanium alloy, ATN titanium alloy, 48-T-7 titanium alloy, ATZ alloy heat conductivity, ATZ alloy electric resistance, ATN alloy heat conductivity, ATN alloy electric resistance, 48-T-7 alloy heat conductivity, 48-T-7 alloy electric resistance

ABSTRACT: The heat conductivity, electric resistance, and Lorentz number of the titanium alloys ATZ (2.5—3.5% Al, 0.4—0.9% Cr, 0.26—0.6% Fe, 0.25—0.6% Si, and 0.01% B), the ATN (1.5—2.5% Al, 0.2—0.5% Cr, 0.2—0.4% Fe, 0.2—0.4% Si; and 0.01% B) and the 48-T-7 (2.5% Al, 3.5% Zr) were determined at 20—55 C. It was found that

Card 1/3

L 15251-65
ACCESSION NR: AP4045909

the heat conductivity and electric resistance of all these alloys increase with increasing temperature, while the Lorentz number drops (see Fig. 1 of the Enclosure). All the tested alloys had a higher electric resistance and substantially lower heat conductivity than chromium-nickel austenitic steels. Orig. art. has: 1 figure and 1 table.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 01 SUB CODE: MM

NO REF SOV: 005 OTHER: 002

Properties

Card 2/3

L 15251-65
ACCESSION NR: AP4045909

ENCLOSURE: 01

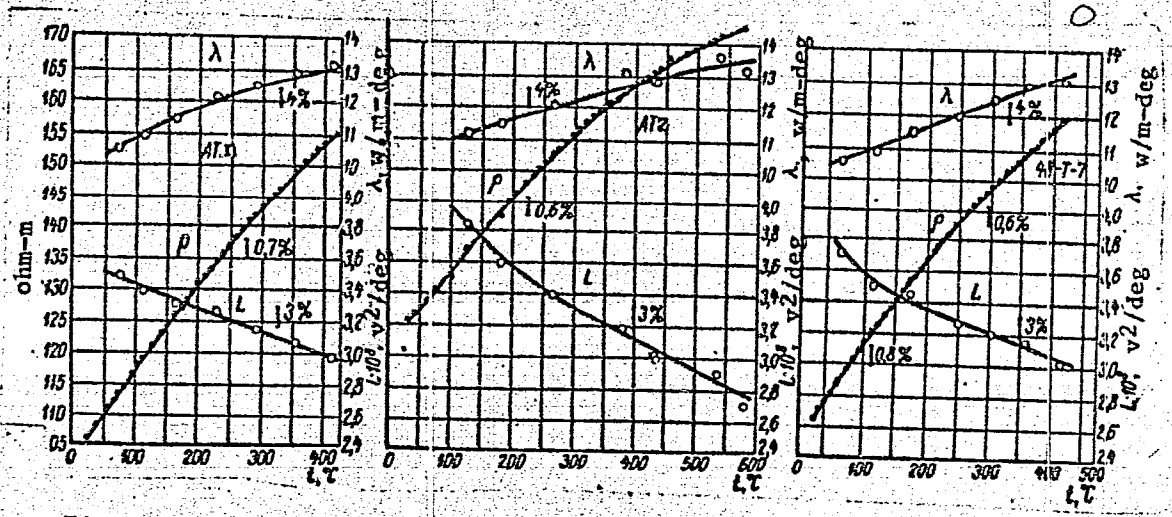


Fig. 1. The heat conductivity λ, electric resistance ρ and Lorentz number L of titanium lease alloys vs. temperature

Card 3/3

ASTANINA, A.A.; NAGIBIN, V.S.; KUNENKOVA Ye.N.; BYKOVSKAYA, Yu.I.; VESELYY, L.I.; GOLUBEVA, I.A.; GERTSEVA, N.S.; SLAVATINSKIY, A.S.; SHTEYNBERG, A.N.; NIKITINA, M.V.; Prinimala uchastiye LAPCHINSKAYA, L.L.; PONOMAREV, A.I., otv. red.; DRAGUNOV, E.S., red.

[Chemical and spectrum analysis in metallurgy; a practical guide] Khimicheskii i spektral'nyy analiz v metallurgii; prakticheskoe rukovodstvo. Moskva, Nauka, 1965. 382 p. (MIRA 18:4)

1. Moscow. Institut metallurgii. 2. Analiticheskaya laboratoriya Instituta metallurgii im. A.A.Baykova (for all except Ponomarev, Dragunov).

L 43181-65 EPF(n)-2/EPR/EPA(s)-2/EWG(v)/EWP(k)/EWP(z)/EPA(c)/EWA(d)/EWA(l)/EWP(v)/EWP(t) Pe-5/Pf-4/Ps-4/Pt-7/Pu-4/Pad IJP(c) WW/JD/HW UR/0170/65/008/003/0361/0363

ACCESSION NR: AP5009774

AUTHORS: Neymark, B. Ye.; Bykova, T. I.

TITLE: Investigating thermal conductivity of thin-walled nickel tubes

SOURCE: Inzhenerno-fizicheskiy zhurnal, v. 8, no. 3, 1965, 361-363

TOPIC TAGS: heat conduction, heat transfer, nickel, thermal conductivity, electric resistivity

ABSTRACT: The Jaeger-Disselchorst method was used to determine experimentally the thermal conductivity of nickel tubes. The tests were carried out with two tubes, one with 8.51/8.025 mm diameter, containing Ni-Co (99.87%) and the other one with 12.96/11.025 mm diameter and with an undetermined composition. Temperature versus thermal conductivity, electric resistivity and Lorentz number curves were obtained in the temperature range 20-500°. For a temperature difference of 20 degrees in the specimen, the thermal conductivity was determined with a ± 2% accuracy, the Lorentz number ± 1.5%, and the electric resistivity ± 0.5%. Orig. art. has: 1 figure, 1 table, and 4 formulas.

ASSOCIATION: Teplotekhnicheskiy institut im. F. Ye. Dzerzhinskogo g. Moskva (Institute of Heat Technology)

Card 1/2

SUBMITTED: 18 May 64.

L 00706-66 EPF(c)/EWA(c)/EWT(1)/EWT(m)/EWP(b)/T/EWP(t) IJP(c) GG/WW/JD

ACCESSION NR: AP5022692 UR/0181/65/007/009/2597/2602

AUTHOR: Bykova, T. T.; Vinokurov, I. V.

TITLE: Use of the electron paramagnetic resonance method for studying the surface of silicon and lead sulfide

SOURCE: Fizika tverdogo tela, v. 7, no. 9, 1965, 2597-2602

TOPIC TAGS: silicon, sulfide, lead compound, electron paramagnetic resonance, resonance line, surface property, crystal surface, single crystal

ABSTRACT: The authors studied the electron paramagnetic resonance spectra of Si and PbS powders at 293 and 77°K. The powders were produced by pulverizing single crystals in air and had a specific surface of (0.3 ± 0.2) $m^2 \cdot g^{-1}$ for PbS and $(1.39\pm\pm0.03)$ $m^2 \cdot g^{-1}$ for Si. The measurements were made in a vacuum of 10^{-7}-10^{-8} mm Hg. The effect of hydrogen, oxygen, water vapor and air on the electron paramagnetic resonance spectra of these materials was also studied in the pressure range of 10^{-4}-10^{-1} mm Hg. The silicon used had *n*-type conductivity with a resistivity of 60 Ω·cm and a diffusion length of 0.4 mm. No resonance was observed in the silicon single crystal at either temperature. Untreated freshly pulverized silicon powder showed the intense symmetric line *A* (see fig. 1 of the Enclosure) of Lorentz shape

Card 1/6

ACCESSION NR: AP5022692

with g = 2.005±0.001 and width ΔH = (8.4±0.5) gauss. The number of centers corresponding to this line was estimated at $(7.2\pm2.7)\cdot10^{15}$ spin·cm^{-2}. Heating the powder for 1-2 hours at 773-873°K in a vacuum of 10^{-7} mm Hg reduces the amplitude of line A by a factor of 10-30 and gives a narrow line B with g = 2.0022 0.0009 and ΔH = (1.0±0.2) gauss superimposed on line A (see fig. 1b of the Enclosure). Additional heating of the powder in a vacuum of 10^{-6} mm Hg for 1 hour reduces the amplitudes of lines A and B by a factor of approximately 4 without changing their width (see fig. 1c of the Enclosure). Cooling in liquid nitrogen reduces the amplitude of line A by a factor of 11, and line B by a factor of 8 with slightly an increase in the widths of both lines. Oxygen at room temperature reduces the amplitude of line B slightly and has no effect on line A. Line B disappears in air at room temperature and line A is increased by a factor of 1.3. These phenomena are reversible. At 77°K, line B disappears in oxygen and line A is slightly intensified. Re-evacuation of the oxygen at 77°K reduces the intensity of line A to the original signal strength, but line B does not reappear. Heating the powder to room temperature restores line B. When hydrogen is admitted at 77°K, the amplitude of line B first increases slowly (to twice the original amplitude) and then has a tendency to reduce. Line A behaves in a similar fashion. Water vapor was admitted at room temperature and the electron paramagnetic resonance signals were measured at 77°K. A new resonance line was observed with g = 1.995±0.0003 and width

ACCESSION NR: AP5022692

ΔH = (1.0±0.2) gauss. It is assumed that line *A* is due to SiO_{x1} centers which are formed by the addition of oxygen to the silicon during pulverizing in air. Heating the powder in a vacuum apparently drives off some of the oxygen from the surface with the formation of SiO_{x2} centers which give the line *B*. The line *B* must be due to centers which are localized on the very surface of the silicon since this line disappears when oxygen is admitted at 77°K. The effect which hydrogen has on this line is apparently due to the reducing action of hydrogen. The line associated with water vapor is not fully explained. The *n*-PbS single crystals with a carrier concentration of $(3\text{-}5)\cdot10^{18}$ cm^{-3} showed no electron paramagnetic resonance signals when freshly pulverized and measured in air. In vacuum, an asymmetric signal appears with g_{av} = 2.002±0.001 and width ΔH = (13.4±0.9) gauss. This signal was considerably reduced by heating in a vacuum and in hydrogen. The original amplitude of the signal is restored by admitting oxygen at room temperature. It was found that the number of centers contributing to this signal is increased by a factor of 3.3 with the admission of oxygen and reaches a value of the order of $(5\pm3)\cdot10^{14}$ spin·cm^{-2}. Cooling the specimen to 77°K in a vacuum of 10^{-5} mm Hg increases the amplitude of the electron paramagnetic resonance signal and changes its anisotropy. An additional narrow line appears at 77°K. Oxygen considerably reduces the signals at the low temperature. This phenomenon is reversible. The experimental

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307920006-4"

ACCESSION NR: AP5022692 12

data are explained by assuming that oxygen is adsorbed in two ways on the surface of lead sulfide. The signal with $g = 2.002$ is identified with the peroxide radical (O_2^-) which is formed by the action of oxygen at room temperature. The reduction in the electron paramagnetic resonance signal with the admission of oxygen at 77°K may be due to the considerably weaker bond between oxygen and the lead sulfide surface. The narrow line which appears only at 77°K is also apparently due to a surface radical since this phenomenon is reversible. The effect of water vapor and hydrogen on these signals was also studied. No change was observed in the spectrum at either temperature. Apparently neither water vapor nor hydrogen forms any additional surface radicals and the physical adsorption of non-paramagnetic molecules does not have any noticeable effect on the electron paramagnetic resonance spectrum. The results of these experiments may be used in studying the effect of adsorbed gases on the electric and photoelectric properties of these materials. "In conclusion, the authors are grateful to A. A. Lebedev for proposing the idea for these experiments, and for discussing the results, to Z. K. Artykbayeva for taking part in the experiments, to B. A. Kazenov for providing the single crystals of lead sulfide, and to N. N. Chernyshkov for measuring the powder surface." Orig. art. has: 5 figures.

44,55

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307920006-4"

L 00706-66

ACCESSION NR: AP5022692

41,55 6

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University); Institut khimii silikatov im. I. V. Grebenshchikova AN SSSR, Leningrad (Institute of the Chemistry of Silicates, AN SSSR) 44,55

SUBMITTED: 01Feb65 ENCL: 01 SUB CODE: SS, OP

NO REF SOV: 003 OTHER: 007

Card 5/6

L 00706-66

ACCESSION NR: AP5022692

ENCLOSURE: 01

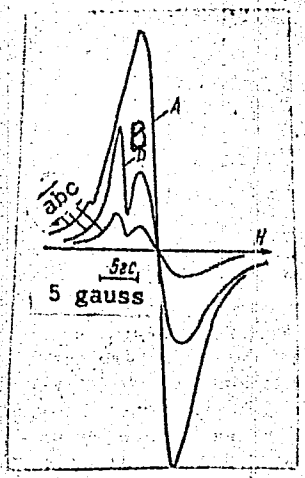


Fig. 1. Variation in electron paramagnetic resonance spectrum when silicon is heated in a vacuum. a--in air when heated to 293°K; b--after degassing at 673°K at 10^{-7} mm Hg; c--after additional heating at 773°K for 1 hour at 10^{-7} mm Hg. Curve a on this drawing is reduced by a factor of 13.

Card 6/6

87908

S/181/60/002/012/008/018
B006/B063

9,4300
26,2421

AUTHORS: Berlaga, R. Ya., and Bykova, T. T.

TITLE: Effect of Oxygen Adsorption on the Photoelectromotive Force of Lead-sulfide Layers

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 12, pp. 3045-3047

TEXT: The occurrence of a photo-emf in polycrystalline PbS layers was discovered by Berlaga, M. A. Rumsh, and L. P. Strakhov (Ref. 1). The photocell consisted of a glass backing on which a PbS layer and graphite electrodes had been sputtered. After a heat treatment in air, the photo-emf increased sharply from some thousandths of volts up to 3 v and depended on the direction of the light ray. Now the authors have studied the effect of oxygen adsorption on the photo-emf of a cell in a glass flask. The internal air pressure could be varied from atmospheric pressure to 10^{-6} mm Hg, and the temperature of the photolayer from room temperature to several hundred °C. It was found that between 20° and 200°C, the air adsorbed on the layer has a reversible effect on the photo-emf. Sorption and desorption of oxygen changed resistivity much the same as the photo-emf.

Card 1/3

87908

Effect of Oxygen Adsorption on the Photo-electromotive Force of Lead-sulfide Layers

S/181/60/002/012/008/018
B006/B063

Study of the variation of photo-emf and resistivity as dependent on the deaeration time showed that both photo-emf and resistivity become constant after a deaeration time of 20-60 min. p-type layers differ from n-type layers in that the photo-emf and resistivity of the latter are reversibly reduced by deaeration down to 1/1000. p-type specimens undergoing deaeration first show increasing photo-emf and resistivity, which decrease again after passing through a maximum where their conductivity goes over into n-type one. The experiments are interpreted as follows: The sputtered layer is composed of microcrystals and has n-type conductivity. When the layer is sensitized, its conductivity changes to p-type or remains n-type, depending on the quantity of adsorbed oxygen. This is ascribed to the fact that p-junctions may appear on the microcrystals, which may also be held responsible for the occurrence of photo-emf. The authors thank Academician A. A. Lebedev for comments and discussions, and the student Ye. Pivovarova for assistance in experiments. There are 3 figures and 3 references: 2 Soviet and 1 British.

Card 2/3

87908

Effect of Oxygen Adsorption on the Photo-electromotive Force of Lead-sulfide Layers

S/181/60/002/012/008/018
B006/B063

ASSOCIATION: Leningradskiy gosudarstvennyy universitet, Nauchno-issledovatel'skiy fizicheskiy Institut, Problemnaya laboratoriya poluprovodnikov (Leningrad State University, Scientific Research Institute of Physics, Laboratory for Semiconductor Problems)

SUBMITTED: April 28, 1960

X

Card 3/3

409C

24.7000
26.2420

S/181/62/004/009/045/045
B104/B186

AUTHORS: Berlaga, R. Ya., and Bykova, T. T.

TITLE: Change of the surface potential of lead sulfide layers under irradiation

PERIODICAL: Fizika tverdogo tela, v. 4, no. 9, 1962, 2629-2631

TEXT: The change of the surface potential of polycrystalline lead sulfide layers under irradiation ($0.6 \leq \lambda \leq 1.6\mu$) was determined by measuring the changes in the contact potential differences ΔP between PbS and a standard electrode under modulated irradiation. The PbS layers were applied to glass backings by spray coating. Previously, a semitransparent SnO_2 layer had been applied to these backings as the lower electrode. A semitransparent SnO_2 layer, applied to glass or quartz, was used as a standard electrode. The changes in ΔP were brought about in specimens not subjected to heat treatment and in specimens previously annealed in air for 10-30 min at 400-450°C. Under irradiation, no changes in ΔP were observed in specimens not subjected to heat treatment. In annealed

Card 1/2

Change of the surface potential...

specimens ΔP attained several hundred microvolts. ΔP of freshly sprayed layers depends exponentially on the irradiation intensity. ΔP of annealed specimens depends linearly on the intensity. Heat treatment displaces the spectral distribution of ΔP to longer waves. An effect of the surrounding medium was observed especially in freshly sprayed layers. Hence, it is concluded that the change in ΔP on irradiation is associated with modulations of the surface barriers. There are 2 figures.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: April 4, 1962 (initially)
June 4, 1962 (after revision)

Card 2/2

ARTAMONOV, O.M.; BERLAGA, R.Ya.; BYKOVA, T.T.

Changes in the surface potential of lead sulfide films due to illumination. Vest. LGU 18 no.4:41-46 '63. (MIRA 16:3)
(Lead sulfide) (Photoelectricity)

BYKOVA, T.V.; YAKOVLEV, B.M.

Spectrum analysis of electrolytic baths for acidic electrolytic tinning and nickel plating. Fiz.sbor. no.4:510-512 '58. (MIRA 12:5)

1. Avtomobil'nyy zavod, Gor'kiy.
(Electrolytes--Spectra)

L 25473-66 EWT(1)/EWT(m)/EWP(t) IJP(c) AT/JD
ACC NR: AP6009692 SOURCE CODE: UR/0181/66/008/003/0952/0957

AUTHOR: Bykova, T. T. 74 B

ORG: Leningrad State University im. A. A. Zhdanov (Leningradskiy gosudarstvennyy universitet)

TITLE: Photoconductivity and surface photo emf of epitaxial layers of lead sulfide

SOURCE: Fizika tverdogo tela, v. 8, no. 3, 1966, 952-957

TOPIC TAGS: photoconductivity, photo emf, lead compound, surface property, epitaxial growing, gas adsorption, electron paramagnetic resonance

ABSTRACT: The author investigated the influence of adsorbed oxygen on the photoconductivity and surface photo emf of epitaxial layers grown in vacuum of 10^{-8}--10^{-9} mm Hg or in oxygen at pressures 10^{-5}--10^{-1} mm Hg. The photoconductivity was measured with the aid of 450-μsec light flashes producing up to ~700 w/cm^2 on the surface. The surface emf was measured by a capacitor method. To check on the effect of the grain boundaries on photoconductivity, the variation of the photoelectric properties of single-crystal and polycrystalline lead sulfide layers was compared. No noticeable photoconductivity was observed in vacuum even at the maximum illumination. A photo emf, usually not exceeding 40--60 μv, was observed on freshly deposited lead sulfide layers grown on the surface of single-crystal PbS in the vacuum. Oxygen is shown to be adsorbed on the surface in two forms, either by physical or by chemical adsorption. These two have different effects on the surface photo emf. The differ-

Card 1/2

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ACC NR: AP6009692

ent character of the variation of the photoconductivity following the adsorption of the oxygen by single-crystal and polycrystalline PbS layers is connected with the scattering of the carriers by the crystallite boundaries. Upon injection of the oxygen there is no noticeable change of the photo emf but further soaking of the layer in oxygen at 77K changes not only the magnitude but also the sign of the photo emf, and the resultant emf increases with increasing oxygen pressure. A relation is established between the variation of the photoelectric properties of PbS layers following adsorption of oxygen and the change in the EPR signals obtained from the PbS surface. Orig. art. has: 6 figures.

SUB CODE: 20/ SUBM DATE: 02Jun65/ ORIG REF: 003/ OTH REF: 002

Card 2/2 cc

BYKOVA, T.V.; ROMANOVA, L.Ya.; RUDNEVSKIY, N.K.; KHOKHLOV, G.Ya.; YAKOVLEV, B.M.

Spectral method of determining bismuth in wrought iron. Zav.lab. 27 no.3:315 '61. (MIRA 14:3)

1. Gor'kovskiy avtomobil'nyy zavod.
(Bismuth—Spectra)
(Cast iron)

ASHERSON, M. (Fergana); ALEKSEYEVA, M.; ZAMKOVSKIY, V., liteyshchik; BYKOVA, V. (Kiyev); ZUBKO, A.; DUKHNEVICH, B. (Vil'nyus)

On good people. Sov. profsoiuzy 19 no.11:19 Je '63.
(MIRA 16:8)

1. Literaturnyy sotrudnik mnogotirazhnoy gazety fabriki "Skorokhod", Leningrad (for Alekseyeva). 2. Mekhanicheskiy zavod "Santekhprom", Simferopol' (for Zamkovskiy). 3. Nachal'nik otdeleniya Gosudarstvennoy avtomobil'noy inspektsii Sovetskogo rayona, Kuybyshev (for Zubko).
(Trade unions—Officers)

IPATOVA, N.N. (Ryazan'); BYKOVA, V.A. (Ryazan')

Comparative clinical characteristics of complicated influenza in recent years. Fel'd. i akush. 25 no.11:14-17 N '60. (MIRA 13:11)
(INFLUENZA)

S/035/61/000/012/022/043
A001/A101

AUTHORS: Bykova, V.A., Panina, V.K.

TITLE: Observations of Venus in 1959

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 12, 1961, 70, abstract 12A569 ("Byul. Vses. astron.-geod. o-va", 1961, no. 29, 41 - 43)

TEXT: A team of observers conducted observations with a 5" refractor of the Moscow planetarium from 21 March to 22 August, 1959. 146 drawings were made, from which extensions of crescent terminals and deviations of the visible phase from calculated ones can be obtained. Data are tabulated and presented graphically. Composite drawings for 4 periods are given, which were obtained photographically by uniting several drawings on one image.

I. L.

[Abstracter's note: Complete translation]

Card 1/1